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A LIVABLE ENVIRONMENT FOR WILDLIFE IS A QUALITY ENVIRONMENT FOR MAN

Montana Outdoors

VOLUME V—NO. 6 MONTANA FISH AND GAME DEPARTMENT JUNE, 1970

This exhibit of marten, showing dark and light color phases, was prepared by Ken Greer at the fish and game laboratory in Bozeman and will soon be on public display.

MARTEN IN MONTANA

by Ken Greer

For durability, softness and beauty, the fur of marten ranks very high. It is frequently called the American sable. The famous sable is only a larger marten that lives in the pinefir forests of Siberia.

The martens' fine fur encouraged extensive trapping of these animals. They have been greatly reduced in abundance and distribution, especially in eastern North America. In Canada, Alaska and in the western mountains, successful protective measures have preserved good marten populations in many areas. In Montana, marten are common to abundant in the western third of the State, but less common in the mountain ranges east of the Continental Divide.

Considerable differences are found in the pelage coloration and patterns of throat patches among marten. Classification of each pelt is important to the interests of the fur industry. Currently, the demand is greater for dark pelts and therefore prices follow the same pattern.

From 300 to 500 marten were trapped in Montana each year during the ten seasons of 1958 through 1968. The 1963-1968 value of marten pelts to trappers was $1,600.00 to $2,600.00 with an average pelt price of $5.33 paid for each marten.

Size

Males are 20 to 30 inches in total

length, including an 8 to 9 inch tail, and weigh from 2 to 4 pounds. Females are 20 to 24 inches in total length and weigh from 2 to 3 pounds.

Description

Marten resemble large mink but have more prominent ears and their tails are bushier. Each has a buffy spot on the chest. The hair on the soles of the feet grows long and completely covers the pads and toes.

Marten have great dexterity in climbing trees.

They do not migrate to lower elevations during winter, nor do they hibernate.

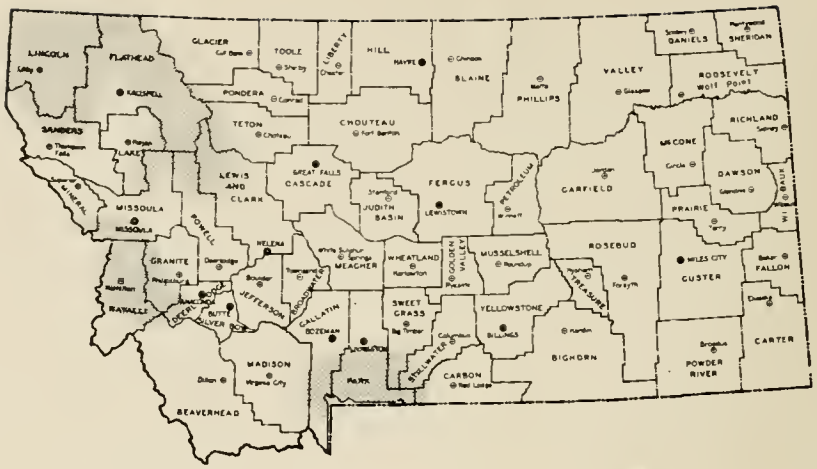
They are quite curious and therefore easily trapped. They hunt during day or night and sleep at any time, or sun bask in tree branches. They avoid getting wet as water soaks and mats their fur.

Habitat

Their habitat is spruce, balsam and pinefir forests.

Food

Marten hunt and catch red squirrels in the tree tops but are equally agile on the ground. Their prey include: conies, chipmunks, rabbits, young woodchucks, wood rats, shrews, mice, birds, eggs, insects, reptiles, carrion, berries, nuts and honey. They will eat frogs and fish when they can be caught without getting wet feet.



Shaded area shows general range of marten in Montana.

Reproduction

Males are sexually mature as yearlings. Females are not sexually mature as yearlings but breed when 2-years-old and produce a litter their third year.

Mating is during the summer from the middle of July through the middle of August.

Similar to several of the muskbearers, marten experience delayed implantation during gestation. About a week after fertilization, further development of the embryo (blastocyst) is delayed for 7 to 8½ months before development resumes. When development again starts, from February to April, it attaches to the uterine wall. The period of resumed gestation and parturition is less than 28 days.

Usually two to three young are born in April — nearly 9 months after mating. Infants are blind at birth and their eyes do not open for a month or 6 weeks. In about 3 months they achieve adult weight and by fall have become solitary hunters.

Abundance

Marten are common to abundant in the western third of the State but less common in the mountain ranges east of the Continental Divide.

Distribution

Western and southwestern portions of the State.

Director's Column

ENVIRONMENT AND EMPLOYMENT

ED. NOTE: The preceding article is based on a portion of a speech presented to the Montana Wildlife Federation by James Posewitz.

The awareness of environmental problems grows. It is now left to someone to capitalize on the awareness and make the ideas happen. The simple awareness of our plight guarantees no solution, for the demands on natural resources do not diminish. Timber harvest goes on virtually in the manner that it always has. Coal is being loaded into unit trains, bulldozers rove public domain at will in search of minerals, the osprey and peregrine falcon struggle to bring forth an egg with a shell on it, and biologists anxiously await each new analysis of animal flesh, hoping that it will be fit for human consumption.

These are but a few of the nation's problems. Montana, like other states, has problems beyond those of environment that must be recognized and coped with. If conservationists are to be ultimately successful in their efforts, they must be aware of the problems of others, Specifically, they must recognize the relationship between environment and employment.

Conservationists must make it abundantly clear that they are not out to put people out of work. They only believe that it is not necessary to keep all men busy tearing the planet apart. There is little doubt that the seven percent of unemployment currently claimed in Montana must be recognized and dealt with. We Montanans can not turn our backs on this problem and on these people.

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Edited by Vernon Craig

By the same token we can not allow the few who would short-cut environmental considerations to use unemployment as a threat to defeat conservation.

Environmental care means employment—employment of men. Conservationists do not oppose new development in Montana, only development that is not whole—development that is not total. Total development in a natural resource harvesting area means maximum employment. It means employment of men, for men can love the land, machines can not! For example, conservationists are for much more employment in the area of surface mining for coal. They are not satisfied with the handful of men that run the giant machines now chewing at our western prairies. They will be satisfied when men not only mine the coal, but also when men reshape the land, and when there are still more men restoring life to that land. This is total development, good for all Montanans, now and in generation to come.

Montana has many mineral deposits that are now being developed and brought into production. The Fish and Game Department, with other conservationists, strongly supports additional employment at all of these sites. In the near future we hope to have an ecologist working at Lincoln. There are a dozen other sites that need ecologists, but where there is no Land Board to help. The need, nevertheless, is just as great.

Montana's last forested areas outside of wilderness protection are now being altered. These alterations are being designed and planned almost exclusively on a timber-management basis.

The need for additional employment is obvious. Montana's eastern counties continue to lose people. Farms are consolidated and in the process a massive monoculture is developing that can exist only with the chemicals that it has become addicted to. Perhaps the ultimate solution and perhaps the only way to break this addiction is again to diversify agriculture and not invite the massive catastrophes that monoculture can bring. This too would probably mean more employment.

The more of these problems that are investigated, the more apparent it becomes that to treat the land with care, with respect and with love, it takes men. It is an interesting thought that only man can love the land, but then only man can destroy it. Man certainly has shown an uncanny ability to do that.

It is interesting that the mass destruction of our planet occurs in the competition to extract natural resources cheaper than another man can extract a like resource. The thought that the United States has a growing number of people who have to exist through time with a fixed resource base and a finite amount of non-renewable resources apparently has occurred to few. It is this competition to extract cheaply so the extractor can profit, and so you and I can consume cheaply that has led to the practice that has become known as rape and take. In order to end it, a new system could be designed to remove competition from extraction of natural resources, or ground rules or regulations could be formulated that require the game to be played in a manner that does not destroy the land. To accomplish this we must all assume new roles.

Over the years, with few exceptions, conservationists have been critics, and have developed an exceptional skill at holding post-mortems after which is explained, sometimes rather eloquently, how this or that particular resource has been exploited. There are, of course, some notable exceptions such as the Stream Preservation Act and the Dredge Mine Regulation and Land Reclamation Act, and a few others. These laws are good tools. They can be made to work, but they are hardly a full tool chest and not much can be built with them alone. The question now is, can all concerned collectively move out into the arena where things are really happening and get the needed tools.

The role of the critic is a luxury that can no longer be afforded.

Theodore Roosevelt had some words to say about critics.

He said,

"It is not the critic who counts: not the man who points out how the strong man stumbled or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs and comes short again and again; because there is no effort without error and shortcoming; but who does actually strive to do the deed; who knows the great enthusiasm, the great devotion; who spends himself in a worthy cause; who, at the best, knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who know neither victory nor defeat."

Are we, as conservation agencies and individuals, equipped with the courage, the knowledge, and the determination to preserve? Can we convert environmental ideas into real events? Conservationists are suddenly grown and of age. The seed that bore them fell on rocky ground but it took root and it has grown, so like it or not, welcome or not, ready or not, they are now in the arena and the world needs them.

Frank H. Dunkle

REMINDER

Hunting licenses for grizzly bears will not be sold after September 14.

Hunting licenses for bighorn sheep in the unlimited districts, 301 and 501, will not be sold after September 7.

Hunting licenses for mountain goats in the unlimited district, 15, will not be sold after September 14.

This fine display of mink showing a male "cotton" mink and a male and female in prime pelage was prepared by Ken Greer at the fish and game laboratory in Bozeman and will soon be on public display.

MINK IN MONTANA

by Ken Greer

Mink are among the better known and most important members of the weasel family—Mustelidae. They are much like big weasels, but somewhat heavier in build.

Versatility

Mink are easily the most versatile members of the family which is largely composed of specialists. For example, martens are specialized for catching prey in trees; badgers for digging prey out of the ground; otter for catching prey in water; and skunks are highly specialized for defending themselves while looking for prey in the open. Mink, however, can catch fish and amphibians in the water, mice and ground squirrels on land, or tree squirrels in their leafy homes. While mink can make a living almost anywhere, they can not swim as well as otter, climb as well as marten, catch mice as well as weasels, dig as well as badgers, or smell as bad as skunks — but they can do a creditable job at each of these tasks.

FUR

Mink fur is durable, of excellent texture and highly prized. The dense, oily body fur is composed of soft underfur more or less covered by long, glistening guard hairs.

In Montana the mink trapping season is during November and December. An average of 7,000 mink were trapped annually in Montana between 1958 and 1968. The value of mink to trappers during the five seasons of 1963-1968 ranged from $42,000.00 to $119,000.00. A 10-year average pelt price was $10.69 with males valued at $13.00 to $15.00 each and only $6.00 to $8.00 for females.

Changing Fur Values

In the past 30 years there has been a decline in the market for pelts of female mink. At one time pelts of female mink were about two-thirds the value of male mink pelts. A period followed when female pelts were worth about half as much as male pelts. In recent years, 1966-1969, female mink pelt values were about one-third those of males. In 1969, Montana trappers received about $4.00 to $6.00 for the female pelts but about $13.00 to $16.00 for the pelts of males.

Quality of Fur

The quality of fur pelts is determined by experienced graders. An important classification of fur is the fineness or coarseness of texture. Females have finer and denser furs than the males. While this feature is well known to trappers and fur dealers, it is difficult to describe.

Cotton Mink

An unusual condition, "cotton mink", occurs in many mink populations. These animals are recognized by the light-gray to white color and flimsy texture of the underfur. The qualities in cotton mink are undesirable in the fur industry and therefore are valued at only $2.00 to $3.00 per pelt.

Several years ago cotton mink appeared in some abundance each 3 to 5 years in only the drainages of Shields, Gallatin and Madison Rivers. In recent years some cotton mink have appeared in other areas throughout the State. The predominance of cotton mink amounts to about 6 to 8 percent of the annual harvest in Montana.

The cotton quality has been established in experimental animals, as a nutritional deficiency of dietary iron. It appears that in wild mink a nutritional deficiency occurs during a critical period when the summer pelage is being replaced for the winter pelage.

Size

Males range from 20 to 28 inches in total length which includes a tail of 7 to 9 inches. Females are 16 to 20 inches long.

Description:

Adults of both sexes are almost entirely brown with back and tail darkly shaded. The chin is white and white spots occur irregularly on the throat, chest and belly. The summer coat is slightly lighter and less dense than the winter coat which is darkest in late fall and faded toward spring.

There are two molts annually. The

spring molt starts on the muzzle and feet and gradually spreads over the rest of the body. This first molt is completed by mid-July. The winter molt starts at the tip of the tail and works forward beginning the middle of August and is completed sometime in late November or early December.

A pair of musk glands in the anal region, typical of the weasel family, secretes a strong odor which is considered by many to be more obnoxious than that of either weasel or skunk. This odor is given off particularly during the breeding season but also at any period of intense excitement.

Mink are most active during darkness and are semi-aquatic in their habits.

Habitat

Mink dwell along the banks of streams and rivers or shorelines of lakes and marshes. They make their homes under the roots of trees, in cavities of banks, under logs or stumps, in hollow trees, or in muskrat burrows and lodges.

Foods

Mink prey upon shrews, bats, mice, rabbits, squirrels, muskrats, birds, frogs, fish, crayfish, turtles, insects, spiders, eggs, and also eat grass and leaves.

Reproduction

Both sexes reach maturity at approximately 10 months of age. Breeding season begins in late February and matings occur until early April.

Pregnancy varies from 40 to 75 days with an average of 51. This pattern of reproduction in mink is somewhat similar to that in the weasels because both of these species carry their young in a state of suspended development for some time. After fertilization there is a short period of development followed by a period of dormancy when the embryos are free in the uterus. Approximately 30 days before birth, the embryos become implanted in the uterus and complete their development.

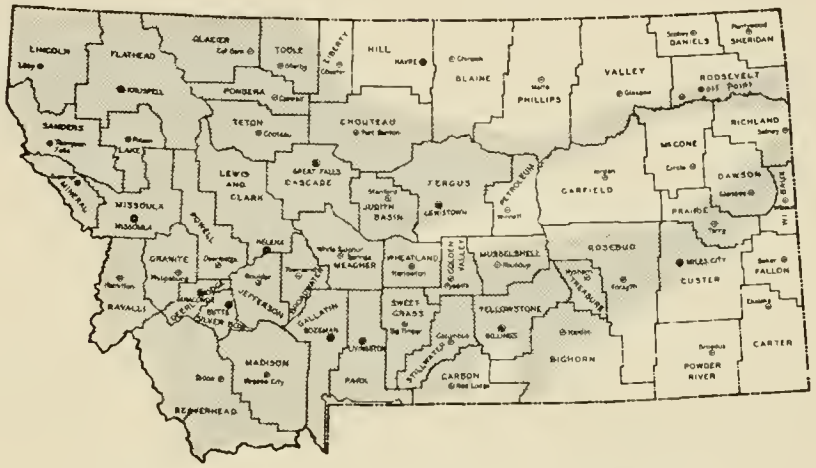
One annual litter is born about the first of May. The average litter is 3 or 4.

Abundance

Mink are rather common throughout the State. From 5,000 to 10,000 are trapped each year in Montana.

Distribution

They may be found in or near any water areas of the State.



Shaded area shows general range of mink in Montana.

DEATH OF A WETLAND

by John P. Weigand

How does one kill a wetland, particularly one valuable to waterfowl? The necessary ingredients include:

a wetland located in Montana's farmbelt;

a farmer trying to make a living in an affluent society;

a government subsidy program for developing cropland;

the necessary funds and machinery needed to drain a wetland.

Put these ingredients in the proper hands usually some agency with technical and financial assistance for drainage, then equip them usually with a dragline, and the result is the death of another valuable waterfowl wetland.

It is no secret that the United States and Canada have been losing wetlands at an alarming rate. Many of these areas have been lost by drainage through federal cost-sharing programs available almost everywhere in the country. These programs are supported by every American taxpayer, including the duck hunter who depends on these areas for his hunting.

The case history of a north-central Montana wetland illustrates the methodical planning of such a death.

In December, 1967, the Montana Fish and Game Department was notified that the Soil Conservation Service (SCS), a division of the U.S. Department of Agriculture, had received a request for federal planning and financial assistance for drainage of a wetland. The landowners had decided that the wetland should produce grain. Due to its large size, however, they could not afford to drain the wetland without assistance.

Upon receipt of such a request, the SCS sends a field man to inspect the wetland. In this case, an engineer, not a trained biologist, made the inspection. Fortunately the engineer was an avid bird hunter and recognized that there was something of value to waterfowl in this wetland. His report indicated this value and the Fish and Game Department was notified.

Later on, SCS personnel (the engineer, district manager, and local field men), fish and game biologists, and the concerned landowners inspected the wetland together. Discussions in the field revealed that the wetland (550-600 acres) had not been cultivated until about 1950. The area was too wet to cultivate in five or more years out of every 10. The area served as a spring resting area for thousand of ducks plus many Canada and snow geese. Duck

broods, hatching in adjacent grass and croplands, used the area during the summer until natural seepage dried the basin. During wet autumns migrating waterbirds again stopped at the basin. Through the early 1960's local sportsmen enjoyed hunting ducks on the pond.

Late snowstorms in May, 1967 resulted in almost 700 flooded acres. All hope of crop cultivation was erased for the 1967 growing season. Standing water (in the form of ice) on 20-30 acres was still evident during the inspection. Smartweed and sedges were common in the lowest part of the basin; sparse clumps of cattail and rushes were also present.

The area was not a dependable grain producer nor was it a dependable waterfowl producer. Could the area realistically become dependable sources of both? The presence of certain aquatic vegetation (indicating a wetland with waterfowl value) prevented federal cost-sharing for drainage.

Considering the "total environment of the basin" it seemed plausible that multi-purpose management could be developed. The following "conditional drainage" plan was proposed by the Fish and Game Department and the SCS engineer:

(1) 10% of the total acreage involved would be developed for waterfowl and upland game bird use in the lowest, wettest part of the basin; 90% of the acreage to be drained and cultivated;

(2) the 10% acreage to be fenced for the life of the entire drainage-wildlife project;

(3) three ponds to be constructed for permanent waterfowl use, water control and storage in the basin; ponds were to be in linear pattern (3 surface--acres in upper pond, 2 surface-acres each in middle and lower ponds) and not less than 8 feet deep;

(4) a 7-row shelterbelt to be constructed along the entire west border of the wildlife area;

(5) the entire land area in the wildlife project, including space between shrub rows after shrubs were established, to be seeded to permanent grass cover for nesting and protective cover for ducks, pheasants, and Hungarian partridge.

The total cost of the drainage project alone was $6,500; the federal government would pay 50% of this or $3,250. The cost of the wildlife project was $13,600 but the government would pay 80% of this, or $10,880. The total tab to the landowners would have been $5,970. For this investment they would be able to harvest grain **every year** on over 500 acres at the same time they could enjoy watching waterfowl and upland game birds successfully rearing their young. Spread out over a 10-year period it would have cost them slightly more than $1.00 per acre to improve the land for both crops and wildlife.

This is a portion of an aerial photo taken over Montana in 1966. In spite of the large body of water, the land was classified as cropland.

On the first review of the proposal, all concerned parties verbally agreed that it had considerable merit. Certain downstream easements had to be secured by the landowners before the SCS could officially start engineering the project. However, within two months after this verbal agreement, some of the landowners decided they did not want any wetland or wildlife area; they only wanted grain. The only way they could obtain federal funds for such unrestricted drainage was to have the land reclassified as a Type I or Type II wetland rather than a Type III wetland which the vegetation indicated this should be.

In an attempt to preserve part of the wetland for wildlife, the Fish and Game Department contacted sportsmen groups about financing the remaining 20% of the wildlife project. Total costs to the landowner would then be limited to those of the main drainage ditch. The Fish and Game Department could not participate in such a wildlife project without land control through ownership or long-time lease.

Unfortunately, memberships in local sportsmen groups in this sparsely populated region were too small to absorb these costs. Larger sportsmen clubs were too far from the area to arouse much interest. An appeal was made to the state director of Ducks Unlimited to see if his organization could help. He, in turn, contacted the regional office in California and was informed that **Ducks Unlimited money could only be used in Canada.** This wetland was 40 miles south of the Canadian border.

A third inspection was made by all concerned persons in September, 1968. The state and regional SCS biologists were present. Dry conditions had prevailed during the spring and summer of 1968. The pond had dried by May and crops had been planted in the basin. The remainder of the basin, not in crops, had been summer fallowed. While traces of cattails and rushes were erased, smartweeds were reappearing in the wettest spots.

With aquatic vegetation rotting adjacent to stubble fields, the area was

reclassified and thrown open for unrestricted drainage. At the time of the inspection, all aquatic vegetation had been plowed under, so the wetland could hardly be classified Type III. Sixteen months earlier the SCS biologist who reclassified the wetland would have needed a boat for the inspection.

As a last resort the Fish and Game Department made a final appeal to preserve part of the wetland for wildlife, but it was ignored by the landowners.

This particular wetland is not yet drained. Downstream easements, apparently, had not been secured for routing the draining water. When such entanglements are cleared, countdown for the wetland's death will probably resume.

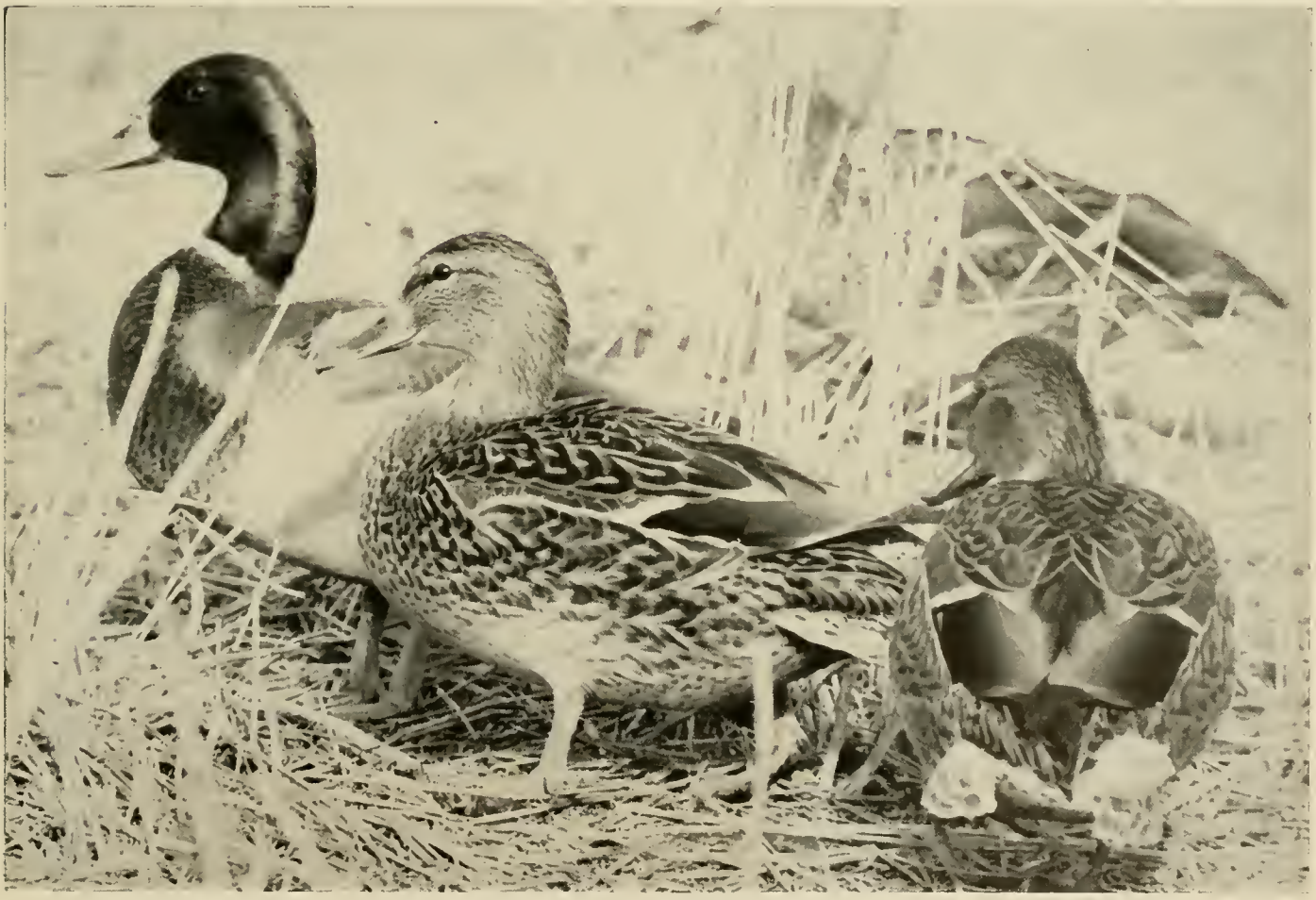
That same September day, seven more ponds were inspected, all much smaller in size, which had also been drained with federal assistance. Studying aerial photos taken 11 years earlier of these sites revealed they too were once Type III wetlands (ineligible for federal cost-sharing for drainage)

During the spring of 1968, another wetland inspection request was forwarded by the SCS. The department inspected the area and proposed a "conditional drainage" agreement incorporating permanent wildlife habitat features. The SCS and landowner agreed; the dragline had already been ordered, drainage channels were constructed within the week. The wildlife habitat part of the agreement had been overlooked, and the farmer had already been paid the federal share for the drainage. To date, domestic livestock are permitted to graze and degrade the remaining wildlife cover of that project.

During the winter 1969-70, five wetland inspection requests were received in northcentral Montana from the SCS. Immediate inspection was made of the five areas and **in all cases drainage was already completed.** Each site had been drained before the inspection requests were mailed to the Fish and Game Department. How and why did these wetland drainages occur?

The USDA not only provides technical assistance for drainage planning but it administers the funds necessary to complete the job. During the 10-year period, 1959-68, the Agricultural Stabilization and Conservation Service (ASCS) authorized 2,577 individual payments totalling $915,878 to permanently drain 112,345 acres of Montana's wetlands. Certainly all of these acres were not of prime value to waterfowl, but the drainage of an average 11,000-plus acres per year of wetlands classified as useful only as cropland is viewed with alarm when one considers the previously mentioned field experiences with the drainage programs.

During 1962, a cooperative agreement to provide technical and financial assistance to drain only those wetlands of no or negligible value to waterfowl was joined by the U.S. Departments of Agriculture and Interior. Their subsidiaries, the SCS



We must stop depending on our northern neighbors to produce waterfowl for the states. Besides producing waterfowl, wetland basins play an important role in recharging underground water reservoirs.

and Bureau of Sport Fisheries and Wildlife, respectively, were to confer on all wetlands which appeared to have waterfowl value. In Montana it was agreed that the Fish and Game Department would be notified of such drainage proposals.

In practice, the landowner wishing to drain an area usually contacts the SCS **first** to see if drainage is feasible and to work out tentative costs. The SCS field man who is trained in agriculture, makes the **first** field inspection of the proposed drainage site. **He** makes the initial decision to drain or not to drain. Often it appears there is really not a question of whether or not to drain, but rather when to order the dragline.

Although the Fish and Game Department has received numerous inspection requests during the last 10 years, USDA records indicate they represent an insignificant part of the total wetlands inspected by the SCS.

It is recognized that the ASCS provides financial assistance to landowners developing wetlands specifically for wildlife use. That program has been minimal, however. No waterfowl ponds were constructed during 1959-61. Since 1962, 46 farmers were paid $33,103 to develop 789 acres of waterfowl wetlands. That's $42.44 per acre to build duck factories compared to $8.15 per acre to kill them.

In Montana, the Bureau of Sport Fisheries and Wildlife wetland acquisition-easement program has been active only a short time. It has centered in northeastern Montana. Through January 1, 1970 over 4,660 acres have been purchased for waterfowl at a cost of $233,547. Average cost per acre was just over $50. Easements, whereby the landowner agrees not to drain, burn or fill a wetland, have incorporated an additional 2,113 acres into the duck factory picture. Total cost of this phase was $21,805 or $10.32 per acre.

Ducks Unlimited boasts of spending over $18 million to "create or recreate nearly 900 'duck factories' " in Canada. At the same time or during the 11 years (1959-1968) Montana farmers drained over 2,500 wetlands at a cost of $1 million. If even half of these were "duck factories", Montana has lost more in the last decade than Duck Unlimited built in 32 years of existence. Yes, and in 1968, 40,000 Ducks Unlimited donated $1.7 million to be spent in Canada—but how much of the federal income taxes they paid in 1968 was spent draining duck factories in their own backyard?

While it seems to be cheaper to kill wetlands than to preserve them, this contradicts the expressed concern for water conservation in Montana. Wetland basins play an important role in recharging water-tables — water which is used by housewives on the farm and in town, by agriculture and even by industry. Montana people are working against their own environment and economy in their endeavor to drain wetlands.

What are some solutions to this problem? The following should be fundamental to any program for preserving wetlands.

(1) Stop depending on our northern neighbors to produce North American waterfowl; many waterfowl species nest in the United States but they require the habitat to do so successfully.

(2) Don't leave the full burden of preserving our wetlands to federal agricultural agencies.

(3) Demand that waterfowl interests be properly represented in any proposed wetland drainage project.

(4) Promote and support federal legislation that provides financial incentive for landowners to maintain existing wetlands or to develop new wetlands.

(5) Pool your donation with that of other wildlife conservationists to preserve "duck factories" in the United States.

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